

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Diegane Dione	Examiner:	Jamisue A. Webb
Serial No.:	10/764,258	Group Art Unit:	3629
Filed:	January 23, 2004	Docket No.:	2383.001US1
Title:	OCCUPANT MANAGEMENT METHOD, SYSTEM, AND PROGRAM PRODUCT		

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**AMENDMENT AND RESPONSE UNDER 37 CFR § 1.114**

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This communication is in response to the Final Rejection dated August 25, 2005. Please amend the above-identified patent application as follows.

This communication is accompanied by a Request for Continued Examination (RCE) and by a Petition, as well as the appropriate fee, to obtain a one-month extension of the period for responding to the Final Rejection, thereby moving the deadline for response from April 21, 2006 to May 21, 2006.

**Amendments to the Claims** are reflected in the listing of claims that begins on page 2 of this amendment and response.

**Remarks/Arguments** begin on page 11 of this amendment and response.

### **AMENDMENTS TO THE CLAIMS**

The following Listing of Claims will replace all prior versions and listings of the claims.

#### **Listing of Claims:**

1-22. (Cancelled)

23. (New) A method of managing a plurality of occupants including visitors of a multi-floored building with each floor having a plurality of areas during an emergency event, the method comprising:

(a) generating a data structure having a hierarchical representation of the multi-floored building, with each floor being represented by a floor node and each of the plurality of areas of each floor being represented by an area node that is relationally associated to the floor node;

(b) generating in the data structure an occupant node for each occupant in the multi-floored building and relationally associating the occupant node with one or more area nodes of a floor of the multi-floored building;

(c) generating in the data structure one or more device nodes for each occupant in the multi-floored building and relationally associating the device nodes to the occupant node for that occupant, each of the device nodes including device information for a device to contact the occupant at an area of a floor associated with the occupant;

(d) traversing the data structure to retrieve device information from one or more device nodes of the data structure in an emergency event that affects at least one area of at least one floor; and

(e) contacting each occupant via a device associated with the retrieved device information to determine the status of that occupant at an area of a floor associated with that occupant.

24. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 23, wherein the status is one of evacuation status and medical status.

25. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 23, wherein the method further comprises automatically detecting a type of the emergency event.

26. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 23, wherein the type of the emergency event is one selected from the group consisting of: fire; hazardous material; earthquake; and burglary.

27. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 23, wherein the method further comprises manually initiating the emergency event.

28. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 23, wherein the method further comprises generating the hierarchical representation for the multi-floored building.

29. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 28, wherein the hierarchical representation is one from an automated building design or a manual input.

30. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 23, wherein the method further comprises dynamically updating the relational association of an occupant node with an area node of a floor of the multi-floored building.

31. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 30, wherein the dynamic update is based on one from occupant's physical location and occupant's schedule within the multi-floored building.

32. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 23, wherein the method further comprises disassociating the occupant node from an area node of a floor of the multi-floored building when an occupant leaves the multi-floored building.

33. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 23, wherein the step of contacting each occupant further comprises:

transmitting a list of possible statuses to the occupant; and  
receiving a selection of a status from the list of possible statuses from the occupant.

34. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 23, wherein the step of contacting each occupant further comprises a step of assigning an unknown status for the occupant if contacting the occupant fails.

35. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 23, wherein the method further comprises providing the occupant with assistance on the basis of the determined status for the occupant.

36. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 35, wherein the step of providing the occupant with assistance further comprises providing directions to the occupant for a nearest exit from an area of a floor of the multi-floored building associated with the occupant.

37. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 23, wherein the method further comprises providing the occupant with a directive on the basis of the determined status for the occupant.

38. (New) The method of managing a plurality of occupants of a multi-floored building in accordance with Claim 23, wherein the method further comprises displaying a status

and an area of a floor of the multi-floored building associated with each occupant on a display device.

39. (New) A system for managing a plurality of occupants of a multi-floored building with each floor having a plurality of areas during an emergency event, the system comprising:

a data structure having a hierarchical representation of the multi-floored building, the data structure including: (i) a floor node for representing each floor of the multi-floored building; (ii) an area node for representing each of the plurality of areas of each floor and being relationally associated to the floor node; (iii) an occupant node for representing each occupant in the multi-floored building and being relationally associated with one or more area nodes of a floor of the multi-floored building; (iv) one or more device nodes for each occupant in the multi-floored building being relationally associated to the occupant node for that occupant, each of the device nodes including device information for a device to contact the occupant at an area of a floor associated with the occupant;

a device for traversing the data structure to retrieve device information from one or more device nodes of the data structure in an emergency event that affects at least one area of at least one floor; and

a device for contacting each occupant via a device associated with the retrieved device information to determine the status of that occupant at an area of a floor associated with that occupant.

40. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 39, wherein the status is one of evacuation status and medical status.

41. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 39, wherein the system further comprises a device for automatically detecting a type of the emergency event.

42. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 41, wherein the device for automatically detecting the type of the emergency event is one selected from the group consisting of: smoke detector; hazardous material detector; earthquake sensor; and burglar alarm.

43. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 39, wherein the system further comprises a device for manually initiating the emergency event.

44. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 39, wherein the system further comprises a means for generating the hierarchical representation for the multi-floored building.

45. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 44, wherein the means for generating the hierarchical representation includes utilization of automated building design or manual input.

46. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 39, wherein the system further comprises a means for dynamically updating the relational association of an occupant node with an area node of a floor of the multi-floored building.

47. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 46, wherein the dynamic update is based on one from occupant's physical location and occupant's schedule within the multi-floored building.

48. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 39, wherein the system further comprises a means for disassociating the occupant node from an area node of a floor of the multi-floored building when an occupant leaves the multi-floored building.

49. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 39, wherein the device for contacting each occupant further comprises: (i) transmitting a list of possible statuses to the occupant's device; and (ii) receiving a selection of a status from the list of possible statuses from the occupant's device.

50. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 39, wherein the device for contacting each occupant further comprises assigning an unknown status for the occupant if contacting the occupant's device fails.

51. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 39, wherein the system further comprises a means for providing the occupant with assistance on the basis of the determined status for the occupant.

52. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 51, wherein the means for providing the occupant with assistance further comprises providing directions to the occupant for a nearest exit from an area of a floor of the multi-floored building associated with the occupant.

53. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 39, wherein the device for contacting each occupant comprises providing the occupant with a directive on the basis of the determined status for the occupant.

54. (New) The system for managing a plurality of occupants of a multi-floored building in accordance with Claim 39, wherein the system further comprises a display device for displaying a status and an area of a floor of the multi-floored building associated with each occupant.

55. (New) A program storage device tangibly embodying a program of instructions executable by a machine to perform the steps of a method for managing a plurality of occupants of a multi-floored building with each floor having a plurality of areas during an emergency event, the method comprising:

(a) generating a data structure having a hierarchical representation of the multi-floored building, with each floor being represented by a floor node and each of the plurality of areas of each floor being represented by an area node that is relationally associated to the floor node;

(b) generating in the data structure an occupant node for each occupant in the multi-floored building and relationally associating the occupant node with one or more area nodes of a floor of the multi-floored building;

(c) generating in the data structure one or more device nodes for each occupant in the multi-floored building and relationally associating the device nodes to the occupant node for that occupant, each of the device nodes including device information for a device to contact the occupant at an area of a floor associated with the occupant;

(d) traversing the data structure to retrieve device information from one or more device nodes of the data structure in an emergency event that affects at least one area of at least one floor; and

(e) contacting each occupant via a device associated with the retrieved device information to determine the status of that occupant at an area of a floor associated with that occupant.

56. (New) The program storage device in accordance with Claim 55, wherein the status is one of evacuation status and medical status.

57. (New) The program storage device in accordance with Claim 55, wherein the method further comprises automatically detecting a type of the emergency event.

58. (New) The program storage device in accordance with Claim 55, wherein the type of the emergency event is one selected from the group consisting of: fire; hazardous material; earthquake; and burglary.



59. (New) The program storage device in accordance with Claim 55, wherein the method further comprises manually initiating the emergency event.

60. (New) The program storage device in accordance with Claim 55, wherein the method further comprises generating the hierarchical representation for the multi-floored building.

61. (New) The program storage device in accordance with Claim 60, wherein the hierarchical representation is one from an automated building design or a manual input.

62. (New) The program storage device in accordance with Claim 55, wherein the method further comprises dynamically updating the relational association of an occupant node with an area node of a floor of the multi-floored building.

63. (New) The program storage device in accordance with Claim 62, wherein the dynamic update is based on one from occupant's physical location and occupant's schedule within the multi-floored building.

64. (New) The program storage device in accordance with Claim 55, wherein the method further comprises disassociating the occupant node from an area node of a floor of the multi-floored building when an occupant leaves the multi-floored building.

65. (New) The program storage device in accordance with Claim 55, wherein the step of contacting each occupant further comprises:

transmitting a list of possible statuses to the occupant; and

receiving a selection of a status from the list of possible statuses from the occupant.

66. (New) The program storage device in accordance with Claim 55, wherein the step of contacting each occupant further comprises a step of assigning an unknown status for the occupant if contacting the occupant fails.

67. (New) The program storage device in accordance with Claim 55, wherein the method further comprises providing the occupant with assistance on the basis of the determined status for the occupant.

68. (New) The program storage device in accordance with Claim 67, wherein the step of providing the occupant with assistance further comprises providing directions to the occupant for a nearest exit from an area of a floor of the multi-floored building associated with the occupant.

69. (New) The program storage device in accordance with Claim 55, wherein the method further comprises providing the occupant with a directive on the basis of the determined status for the occupant.

70. (New) The program storage device in accordance with Claim 55, wherein the method further comprises displaying a status and an area of a floor of the multi-floored building associated with each occupant on a display device.

### **REMARKS**

This communication is in response to the Final Rejection dated August 25, 2005, and the reference cited therewith.

At the outset and before addressing the rejections raised in the Final Rejection, the Applicant has cancelled Claims 1-22 without prejudice or disclaimer. The Applicant has added Claims 23-70 to recite the present invention with more particularity and to obviate the rejections maintained in the Final Rejection. As a result, Claims 23-70 are now pending in this application. Support for the new claims is found in the specification as filed at least in paragraphs 21, 23-47, 58-60, 62-63, 66, 72 and 76 in view of Figs. 1-4. The Applicant respectfully submits that no new subject matter has been added via the amendments to the claims.

#### **§112 Rejection of the Claims**

Claims 1-7 were rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness. In traversing the rejection of Claims 1-7, the Applicant respectfully submits that the rejection is now moot in view of the cancellation of Claims 1-22. Consequently, the Applicant respectfully requests the Examiner to withdraw the rejection of Claims 1-7 pursuant to 35 U.S.C. § 112, second paragraph.

#### **§101 Rejection of the Claims**

Claims 1-17 were rejected under 35 U.S.C. § 101 as being directed to non-statutory matter. In traversing the rejection of Claims 1-17, the Applicant respectfully submits that the rejection is now moot in view of the cancellation of Claims 1-22. Consequently, the Applicant respectfully requests the Examiner to withdraw the rejection of Claims 1-17 pursuant to 35 U.S.C. § 101. In this regard, the Applicant respectfully notes and submits that the newly added claims are statutory because they apply, involve, use or advance the technological art of computer technology in managing a plurality of occupants of a multi-floored building during an emergency event, as particularly recited in the newly added Claims 23-70.

§102 Rejection of the Claims

Claims 1-6 and 8-22 were rejected under 35 U.S.C. § 102(e) for anticipation by Hunter et al. (U.S. Publication No. 2003/0069002) (hereinafter "Hunter"). In traversing the rejection of Claims 1-6 and 8-22, the Applicant respectfully submits that the rejection is now moot in view of the cancellation of Claims 1-22. Consequently, the Applicant respectfully requests the Examiner to withdraw the rejection of Claims 1-6, and 8-22 pursuant to 35 U.S.C. § 102(e). As discussed more fully below, the Applicant respectfully submits that Hunter fails to disclose the invention as it is now recited in the newly added claims 23-70.

§103 Rejection of the Claims

Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Hunter. In traversing the rejection of Claim 7, the Applicant respectfully submits that the rejection is now moot in view of the cancellation of Claims 1-22. Consequently, the Applicant respectfully requests the Examiner to withdraw the rejection of Claim 7 pursuant to 35 U.S.C. § 103(a). As discussed more fully below, the Applicant respectfully submits that Hunter fails to teach or suggest the invention as it is now recited in the newly added claims 23-70.

In view of the foregoing rejections under §§ 102, 103, Applicant respectfully submits that Hunter is defective in that it fails to disclose, teach or suggest the data structure having hierarchical representation of a multi-floored building and the association of areas of each floor with occupants so as effectuate effective management of the occupants in an emergency event that affects one or more areas of a floor of a building, as particularly recited in the independent claims 23, 39 and 55 set forth hereinabove. The claimed invention thus facilitates management of occupants using a hierarchical topology, i.e., based on the association of occupants with areas of a floor of a building. However, in contrast to the claimed invention, Hunter is directed to a linear or spatial topology, i.e., based on association of users to a geographic location, such as "lower Manhattan" (See Hunter, paragraphs 52-56). For example, Hunter would not be able to manage occupants on a fifth floor of a building in conference room A, lunch room B, cubicles C...F and secretarial stations G...K in relation to an emergency event in a particular area of a

particular floor that building. Consequently, Applicant respectfully submits that Hunter fails to anticipate or render obvious the invention recited in new claims 23-70.

**CONCLUSION**

The Applicant respectfully submits that the claims are in condition for allowance, and earnestly requests notification of allowance. The Examiner is invited to telephone Applicant's attorney at 612-373-6900 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

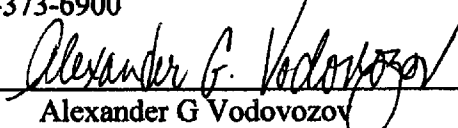
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By his Representatives,

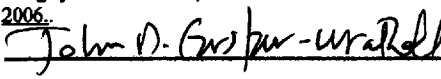
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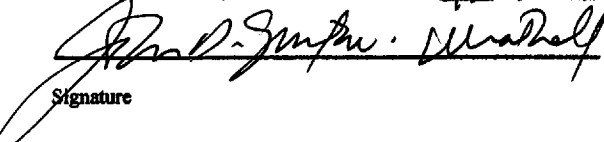
Date May 19, 2006

By

  
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